From Lab Measurement

X: 1.125 in (2.86 cm)

Y: 42.25 in (107.3 cm)

Theta: 2 degree to the left

Camera Pitch: 19 degree

Lens Height: 4.25 in (10.8 cm)

From Program

Camera Matrix K = [307.7379294605756, 0.0, 329.692367951685, 0.0, 314.9827773443905, 239.4605588877848, 0.0, 0.0, 1.0]